

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1-25 (canceled)

26. (previously presented) A method comprising:
providing a shaped body having first and second surfaces, said body further including an array of reaction wells in fluid communication with each of said first and second surfaces;
providing a reaction support, located in each of said reaction wells;
jetting into a first set of said reaction wells drops of fluid comprising a first chemical reactant species;
jetting into a second set of said reaction wells drops of fluid comprising a second chemical reactant species;
allowing said chemical reactant species to form a reaction product attached to said reaction support, within at least some of the reaction wells;
jetting into those reaction wells that include a reaction product, a further chemical reactant species comprising a cleaving agent, to effect cleavage of the reaction product from the reaction support; and
collecting said reaction product on a collection plate, said collection plate being adjacent to the second surface.

27. (original) The method of claim 26 wherein said reaction support is porous.

28. (original) The method of claim 27 wherein the porous support comprises controlled pore glass.

29. (original) The method of claim 27 wherein the porous support comprises a porated solid.

30. (original) The method of claim 27 wherein the porous support comprises fibers having a substantially common axis normal to the first surface.

31. (original) The method of claim 27 wherein the porous support is an anisotropic membrane.

32. (previously presented) The method of claim 26 wherein the support is capable of transporting fluid contacting the first surface to the second surface of the support in a direction substantially normal to the first surface.

33. (canceled)

34. (previously presented) The method of claim 26, wherein said collection plate has a plurality of wells for receiving said reaction product.

35. (original) The method of claim 26 under control of a digital control means.

36. (previously presented) The method of claim 26 wherein said first and second sets of reaction sites are substantially identical.

37. (previously presented) The method of claim 26 wherein said reaction product is an oligonucleotide.

38. (previously presented) A method for synthesizing a chemical species comprising

bonding an initial reaction fragment to a first surface of a reaction support, said first surface having a plurality of preselected reaction sites;

jetting upon a first set of said reaction sites a first chemical reactant species to effect a chemical reaction with the initial reaction fragment at the first set of reaction sites;

jetting upon a second set of said reaction sites a second chemical reactant species to effect a chemical reaction with either

i. the initial reaction fragment at sites not in common with said first set of reaction sites, or

ii. the reaction product of the initial reaction fragment and the first chemical reactant at those sites which are in common with said first set of reaction sites;
identifying those reaction sites that include a reaction product;

jetting onto those reaction sites that include a reaction product, a further chemical reactant species comprising a cleaving agent, to effect cleavage of the reaction product from the reaction support; and

recovering the chemical species on a collection plate located adjacent to a second surface of said reaction support, wherein said first and second surfaces are substantially parallel to one another and wherein the reaction support is present in subportions located within reaction wells.

39. (previously presented) The method of claim 38 further comprising, prior to said recovering, a step comprising:

jetting upon a further set of said reaction sites a further chemical reactant species, which may be the same as or different from any prior chemical reactant species, to effect a chemical reaction with either

i. the initial reaction fragment at sites not in common with any prior set of reaction sites, or

ii. the reaction product of the initial reaction fragment and the additional chemical reactants delivered to sites of said further set.

40. (original) The method of claim 39 performed iteratively.

41. (canceled)

42. (previously presented) The method of claim 38 wherein the chemical species is an oligonucleotide.

43-53. (canceled)